

Application No. 09/875,434

2

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (currently amended) A computer readable medium having stored
2 computer executable software system for classifying files of non-textual
3 subject data comprising:
 - 4 a system decision module that includes integrated within said
5 computer executable software configured to include:
 - 6 (a) a task component having a plurality of
7 classification tasks arranged in a sequential progression of decision
8 making, said sequential progression of decision making including a
9 plurality of classification nodes for assigning classes to an individual file
10 of said files of non-textual subject data, at least some of said
11 classification nodes including algorithms for determining which of a
12 plurality of alternative next classification nodes is to be encountered in
13 said sequential progression of decision making;
 - 14 (b) an algorithmic component having a storage of
15 available algorithms for execution at said classification nodes, said
16 algorithmic component being common to said classification nodes
17 and being accessed by each said classification node for selecting
18 an algorithm a specific algorithm for each of said classification tasks,
19 said specific algorithm being configured to execute at least one of
20 content-based analysis for processing content-based data and
21 meta-data analysis for processing meta-data;
 - 22 (c) a sub-algorithmic component for selecting at least
23 one sub-algorithmic routine for said specific algorithm having a plurality
24 of sub-algorithm routines, said at least one sub-algorithmic routine
25 being selected based on said selecting said algorithm; and
 - 26 (d) a learning component for modifying said
27 arrangement of classification tasks according to determinations of
28 the frequencies of assignments of said classes to said files of
29 non-textual subject data.

Application No. 09/875,434

3

1 2. (original) The system of claim 1 further comprising a system web-service
2 module for providing Internet access to said system decision module.

1 3. (original) The system of claim 1 further comprising a system interface
2 module for providing communications among a plurality of system and non-
3 system modules, wherein one of said system modules is said system decision
4 module.

1 4. (original) The system of claim 3 wherein each of said non-system modules
2 includes at least one said sub-algorithmic routine.

1 5. (original) The system of claim 3 wherein said system interface module
2 further includes data components for storing data associated with classifying a
3 plurality of said files of said non-textual subject data and at least one control
4 component for executing said sub-algorithmic routines.

1 6. (original) The system of claim 1 further comprising a media input/output
2 module for administering data associated with classifying said non-textual
3 subject data by reading and writing said data among a plurality of modules.

1 7. (original) The system of claim 1 wherein said learning component is
2 configured to identify an algorithm for each of said classification tasks and at
3 least one sub-algorithmic routine for said algorithm.

1 8. (original) The system of claim 1 further comprising a data capturing device
2 configured to capture said content-based data and record said meta-data,
3 said content-based data corresponding to content information of a file of said
4 subject data and said meta-data corresponding to situational environmental
5 data of said data capturing device during a capture of said subject data.

Application No. 09/875,434

4

1 9. (currently amended) A method for categorizing files of non-textual data
2 comprising the
3 steps of:
4 establishing a sequential progression of decision making,
5 including using automated processing techniques to define a dependent
6 arrangement of a plurality of task nodes, each said task node being
7 associated with a class for classifying a data file, at least some of said task
8 nodes including algorithms for determining which alternative next task node is
9 to be selected in said sequential progression of decision making, said task
10 nodes including multi-algorithmic task nodes having a plurality of alternative
11 said algorithms for implementing said determination;
12 receiving a file of non-textual subject data; and
13 progressing said file through said sequential progression of
14 decision making, including (a) selecting from among said alternative
15 algorithms at said multi-algorithmic decision nodes, and (b) utilizing an
16 algorithmic component to perform said selection, said selection at least
17 partially based on prior determinations at previously encountered task nodes
18 in said sequential progression.

1 10. (original) The method of claim 9 wherein said step of establishing
2 includes a learning procedure in which content-based data is extracted from
3 each of a plurality of training images and meta-data is identified for each said
4 training image.

1 11. (original) The method of claim 10 further comprising a step of generating
2 a plurality of learning classes that are descriptive of said training images,
3 including using an association pattern technique, said step of generating
4 including applying content-based analysis for said content-based data and
5 meta-data analysis for said meta-data.

1 12. (original) The method of claim 9 further comprising a step of dynamically
2 modifying said sequential progression of decision making, including
3 monitoring said determinations at each of said decision nodes and adjusting
4 for detected patterns in said determinations.

1 13. (original) The method of claim 9 further comprising a step of assigning a
2 semantic description to said file of non-textual subject data for one of
3 organizing said file and matching a query during a search for said file.

1 14. (currently amended) A method for identifying a class for a data file at a
2 classification node comprising the steps of:
3 subjecting an image data file to a transformation function to
4 generate transformed image data, said step of subjecting including transform-
5 ing at least one of content-based data and meta-data, said content-based
6 data corresponding to image data of said file and said meta-data correspond-
7 ing to situationally surrounding conditions of a recording device during a
8 capture of said image data file;
9 performing feature analysis on said transformed image data to
10 derive feature data characteristic of said file; [[and]]
11 applying an algorithmic routine utilizing said feature data to
12 generate a class identifiable with said [[file.]] file; and
13 storing said transformed image data and said feature data
14 characteristic of said image file for use by other said classification nodes.

1 15. (original) The method of claim 14 wherein said step of applying includes
2 selecting said algorithmic routine from a plurality of algorithmic routines.

1 16. (original) The method of claim 14 further comprising a step of defining
2 said algorithmic routine for generating said class based on a training
3 procedure by subjecting a plurality of training image data files having
4 characteristics attributable with said class.

1 17. (original) The method of claim 14 wherein said step of applying includes
2 a selection of said algorithmic routine at least partially based on a
3 determination of a previous classification task.

1 18. (original) The method of claim 14 wherein said step of performing said
2 feature analysis includes applying statistical analysis on said transformed
3 image data.